

MICROLITE<sup>®</sup> Toroidal Cores are manufactured with Metglas<sup>®</sup> amorphous alloy 2605SA1 ribbon. Their unique combination of high saturation flux density and low loss make them the first choice for all energy storage applications, enabling the designer to achieve both size and system cost reduction.



### Applications

- SMPS output inductors
- Flyback transformers
- Differential input inductors
- PVC inductors
- VRM inductors

### Benefits

- High saturated flux density
- Significant size reduction
- Low core loss
- Extended bias capability
- Fewer turns due to higher permeability

#### Physical Properties Metglas MICROLITE XP Cores

|   |       |
|---|-------|
| Ribbon Thickness (μm) . . . . .               | .23   |
| Density (g/cm <sup>3</sup> ) . . . . .        | .7.18 |
| Thermal Expansion (ppm/°C) . . . . .          | .7.6  |
| Crystallization Temperature (°C) . . . . .    | .508  |
| Curie Temperature (°C) . . . . .              | .399  |
| Continuous Service Temperature (°C) . . . . . | .150  |

#### Magnetic Properties Metglas MICROLITE XP Cores

|   |          |
|---|----------|
| Saturation Flux Density (T) . . . . .           | .1.56    |
| Permeability (depending on core size) . . . . . | .245/270 |

Percent Permeability vs. DC Bias @ 25°C

MICROLITE  $\mu = 245$



MICROLITE  $\mu = 270$



Core Loss vs. Flux Density @ 25°C



Temperature Dependence of Inductance

MICROLITE  $\mu = 245$



Permeability vs. Frequency





**Ordering Information**

Example:  
**MP1710XDGC**

METGLAS Products  
Outside Diameter (OD)  
Height (HT) Distributed Gap Core

| Box Type (X) | DuPont Material | UL File No. | Flam. Rating UL 94 | Elec. Rel. Temp. Rec. Index (UL746B) Temp. |
|--------------|-----------------|-------------|--------------------|--|
| P            | Zyrel® 7DG33L   | E41938      | HB                 | 120  |
| L            | Zyrel® FR50     | E41938      | V-0                | 130  |
| V            | Rymite® FR530L  | E68678      | V-0                | 150  |
| M            | Epoxy FR534SD   | E206120     | —                  | — Class B, F                               |

Encapsulated cores are available upon request.

| MICROLITE® Toroidal Cores |                |              |              |                        |                                   |                        |                                   |  |              |                                       |
|---------------------------|----------------|--------------|--------------|------------------------|-----------------------------------|------------------------|-----------------------------------|--|--------------|---------------------------------------|
| Core No.                  | CORE DIMENSION |              |              | Performance Parameters |                                   |                        |                                   |  |              |                                       |
|                           | O.D.Max (mm)   | I.D.Min (mm) | Ht. Max (mm) | Im (cm)                | A <sub>c</sub> (cm <sup>2</sup> ) | Vol (cm <sup>3</sup> ) | W <sub>a</sub> (cm <sup>2</sup> ) | W <sub>a</sub> A <sub>c</sub> (cm <sup>4</sup> ) | Initial Perm | A <sub>L</sub> * (nH/N <sup>2</sup> ) |
| MP1005MDGC                | 11.32          | 4.47         | 6.12         | 2.40                   | 0.10                              | 0.25                   | 0.16                              | 0.016  | 270          | 144.1                                 |
| MP1105MDGC                | 12.19          | 6.07         | 6.29         | 2.80                   | 0.10                              | 0.27                   | 0.29                              | 0.028  | 270          | 116.5                                 |
| MP1205MDGC                | 13.66          | 7.46         | 6.29         | 3.22                   | 0.09                              | 0.30                   | 0.44                              | 0.041  | 270          | 97.7                                  |
| MP1306MDGC                | 14.67          | 7.46         | 7.87         | 3.37                   | 0.15                              | 0.51                   | 0.44                              | 0.066  | 245          | 137.8                                 |
| MP1603MDGC                | 17.03          | 8.99         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.63                              | 0.055  | 270          | 73.9                                  |
| MP1710MDGC                | 18.68          | 12.16        | 11.05        | 4.74                   | 0.20                              | 0.94                   | 1.16                              | 0.230  | 245          | 128.5                                 |
| MP2010MDGC                | 21.25          | 12.16        | 11.05        | 5.13                   | 0.30                              | 1.54                   | 1.16                              | 0.348  | 245          | 180.1                                 |
| MP2310MDGC                | 24.35          | 12.16        | 11.05        | 5.60                   | 0.43                              | 2.38                   | 1.16                              | 0.494  | 245          | 233.7                                 |
| MP2510MDGC                | 26.84          | 18.51        | 11.05        | 7.01                   | 0.27                              | 1.89                   | 2.69                              | 0.725  | 245          | 118.4                                 |
| MP2610MDGC                | 26.92          | 15.97        | 11.05        | 6.61                   | 0.37                              | 2.48                   | 2.00                              | 0.751  | 245          | 174.6                                 |
| MP3210MDGC                | 33.57          | 21.69        | 11.05        | 8.54                   | 0.41                              | 3.52                   | 3.69                              | 1.520  | 245          | 148.3                                 |
| MP3310MDGC                | 34.06          | 14.70        | 11.05        | 7.49                   | 0.71                              | 5.34                   | 1.70                              | 1.210  | 245          | 292.9                                 |
| MP3505MDGC                | 36.40          | 21.69        | 6.29         | 8.97                   | 0.26                              | 2.35                   | 3.69                              | 0.968  | 245          | 90.0                                  |
| MP3510MDGC                | 36.52          | 18.51        | 11.05        | 8.48                   | 0.66                              | 5.58                   | 2.69                              | 1.770  | 245          | 238.9                                 |
| MP3710MDGC                | 38.50          | 21.69        | 11.05        | 9.29                   | 0.61                              | 5.66                   | 3.69                              | 2.251  | 245          | 201.9                                 |
| MP4010MDGC                | 41.58          | 21.69        | 11.05        | 9.76                   | 0.73                              | 7.15                   | 3.69                              | 2.706  | 245          | 231.1                                 |
| MP4510MDGC                | 46.73          | 21.69        | 11.05        | 10.55                  | 0.94                              | 9.91                   | 3.69                              | 3.472  | 245          | 274.4                                 |
| MP7050MDGC                | 13.23          | 7.46         | 6.12         | 3.14                   | 0.08                              | 0.25                   | 0.44                              | 0.035  | 245          | 78.2                                  |
| MP7089MDGC                | 46.55          | 28.95        | 15.72        | 11.65                  | 0.94                              | 10.92                  | 6.58                              | 6.170  | 245          | 247.7                                 |
| MP7109MDGC                | 57.21          | 37.44        | 15.32        | 14.64                  | 1.03                              | 15.13                  | 11.01                             | 11.376   | 245          | 217.4                                 |
| MP7120MDGC                | 17.31          | 10.46        | 7.87         | 4.24                   | 0.14                              | 0.59                   | 0.86                              | 0.119  | 245          | 100.3                                 |
| MP7195MDGC                | 54.32          | 26.97        | 16.52        | 12.49                  | 1.60                              | 19.98                  | 5.71                              | 9.136  | 245          | 394.1                                 |
| MP7206MDGC                | 21.41          | 13.46        | 7.87         | 5.35                   | 0.17                              | 0.89                   | 1.42                              | 0.238  | 245          | 96.2                                  |
| MP7254MDGC                | 39.38          | 24.86        | 15.65        | 9.91                   | 0.75                              | 7.46                   | 4.85                              | 3.656  | 245          | 234.1                                 |
| MP7310MDGC                | 23.49          | 13.46        | 7.87         | 5.66                   | 0.22                              | 1.25                   | 1.42                              | 0.315  | 245          | 120.7                                 |
| MP7324MDGC                | 36.99          | 23.01        | 11.05        | 9.24                   | 0.49                              | 4.50                   | 4.16                              | 2.026  | 245          | 162.3                                 |
| MP7350MDGC                | 23.53          | 14.22        | 9.91         | 5.79                   | 0.27                              | 1.55                   | 1.59                              | 0.425  | 245          | 142.3                                 |
| MP7380MDGC                | 18.30          | 10.23        | 7.87         | 4.35                   | 0.17                              | 0.74                   | 0.82                              | 0.140  | 245          | 120.6                                 |
| MP7438MDGC                | 46.61          | 25.22        | 18.99        | 11.05                  | 1.43                              | 15.80                  | 4.99                              | 7.141  | 245          | 398.4                                 |
| MP7548MDGC                | 33.25          | 19.73        | 11.05        | 8.15                   | 0.47                              | 3.82                   | 3.06                              | 1.435  | 245          | 177.4                                 |
| MP7585MDGC                | 34.87          | 23.95        | 9.91         | 9.08                   | 0.32                              | 2.93                   | 4.50                              | 1.452  | 245          | 109.3                                 |
| MP7715MDGC                | 51.53          | 32.46        | 13.89        | 12.97                  | 0.89                              | 11.57                  | 8.27                              | 7.379  | 245          | 211.7                                 |
| MP7930MDGC                | 27.18          | 13.46        | 11.05        | 6.21                   | 0.48                              | 2.97                   | 1.42                              | 0.681  | 245          | 237.3                                 |

| MICROLITE® Toroidal Cores |                |              |              |                        |                                   |                        |                                   |  |              |                                       |
|---------------------------|----------------|--------------|--------------|------------------------|-----------------------------------|------------------------|-----------------------------------|--|--------------|---------------------------------------|
| Core No.                  | CORE DIMENSION |              |              | Performance Parameters |                                   |                        |                                   |  |              |                                       |
|                           | O.D.Max (mm)   | I.D.Min (mm) | Ht. Max (mm) | l <sub>m</sub> (cm)    | A <sub>c</sub> (cm <sup>2</sup> ) | Vol (cm <sup>3</sup> ) | W <sub>g</sub> (cm <sup>2</sup> ) | W <sub>g</sub> A <sub>c</sub> (cm <sup>4</sup> ) | Initial Perm | A <sub>L</sub> * (nH/N <sup>2</sup> ) |
| MP1306LDGC                | 15.80          | 6.17         | 8.13         | 3.37                   | 0.15                              | 0.51                   | 0.30                              | 0.045  | 245          | 137.8                                 |
| MP1306PDGC                | 15.80          | 6.17         | 8.13         | 3.37                   | 0.15                              | 0.51                   | 0.30                              | 0.045  | 245          | 137.8                                 |
| MP1306VDGC                | 15.80          | 6.17         | 8.13         | 3.37                   | 0.15                              | 0.51                   | 0.30                              | 0.045  | 245          | 137.8                                 |
| MP1603LDGC                | 18.24          | 7.87         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.49                              | 0.042  | 270          | 73.9                                  |
| MP1603PDGC                | 18.24          | 7.87         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.49                              | 0.042  | 270          | 73.9                                  |
| MP1603VDGC                | 18.24          | 7.87         | 4.70         | 3.98                   | 0.09                              | 0.34                   | 0.49                              | 0.042  | 270          | 73.9                                  |
| MP1710LDGC                | 20.22          | 10.87        | 11.43        | 4.74                   | 0.20                              | 0.94                   | 0.93                              | 0.184  | 245          | 128.5                                 |
| MP1710PDGC                | 20.22          | 10.87        | 11.43        | 4.74                   | 0.20                              | 0.94                   | 0.93                              | 0.184  | 245          | 128.5                                 |
| MP1710VDGC                | 20.22          | 10.87        | 11.43        | 4.74                   | 0.20                              | 0.94                   | 0.93                              | 0.184  | 245          | 128.5                                 |
| MP2010LDGC                | 22.78          | 10.87        | 11.43        | 5.13                   | 0.30                              | 1.54                   | 0.93                              | 0.278  | 245          | 180.1                                 |
| MP2010PDGC                | 22.78          | 10.87        | 11.43        | 5.13                   | 0.30                              | 1.54                   | 0.93                              | 0.278  | 245          | 180.1                                 |
| MP2010VDGC                | 22.78          | 10.87        | 11.43        | 5.13                   | 0.30                              | 1.54                   | 0.93                              | 0.278  | 245          | 180.1                                 |
| MP2310LDGC                | 25.91          | 10.80        | 11.48        | 5.60                   | 0.43                              | 2.38                   | 0.92                              | 0.389  | 245          | 233.7                                 |
| MP2310PDGC                | 25.91          | 10.80        | 11.48        | 5.60                   | 0.43                              | 2.38                   | 0.92                              | 0.389  | 245          | 233.7                                 |
| MP2310VDGC                | 25.91          | 10.80        | 11.48        | 5.60                   | 0.43                              | 2.38                   | 0.92                              | 0.389  | 245          | 233.7                                 |
| MP2510LDGC                | 27.79          | 17.27        | 11.48        | 7.01                   | 0.27                              | 1.89                   | 2.34                              | 0.631  | 245          | 118.4                                 |
| MP2510PDGC                | 27.79          | 17.27        | 11.48        | 7.01                   | 0.27                              | 1.89                   | 2.34                              | 0.631  | 245          | 118.4                                 |
| MP2510VDGC                | 27.79          | 17.27        | 11.48        | 7.01                   | 0.27                              | 1.89                   | 2.34                              | 0.631  | 245          | 118.4                                 |
| MP2610LDGC                | 28.32          | 14.15        | 11.48        | 6.61                   | 0.37                              | 2.48                   | 1.57                              | 0.589  | 245          | 174.6                                 |
| MP2610PDGC                | 28.32          | 14.15        | 11.48        | 6.61                   | 0.37                              | 2.48                   | 1.57                              | 0.589  | 245          | 174.6                                 |
| MP2610VDGC                | 28.32          | 14.15        | 11.48        | 6.61                   | 0.37                              | 2.48                   | 1.57                              | 0.589  | 245          | 174.6                                 |
| MP3210LDGC                | 34.95          | 19.86        | 11.48        | 8.54                   | 0.41                              | 3.52                   | 3.10                              | 1.275  | 245          | 148.3                                 |
| MP3210PDGC                | 34.95          | 19.86        | 11.48        | 8.54                   | 0.41                              | 3.52                   | 3.10                              | 1.275  | 245          | 148.3                                 |
| MP3210VDGC                | 34.95          | 19.86        | 11.48        | 8.54                   | 0.41                              | 3.52                   | 3.10                              | 1.275  | 245          | 148.3                                 |
| MP3310LDGC                | 36.07          | 12.95        | 11.48        | 7.49                   | 0.71                              | 5.34                   | 1.32                              | 0.939  | 245          | 292.9                                 |
| MP3310PDGC                | 36.07          | 12.95        | 11.48        | 7.49                   | 0.71                              | 5.34                   | 1.32                              | 0.939  | 245          | 292.9                                 |
| MP3310VDGC                | 36.07          | 12.95        | 11.48        | 7.49                   | 0.71                              | 5.34                   | 1.32                              | 0.939  | 245          | 292.9                                 |
| MP3510LDGC                | 38.10          | 16.69        | 11.48        | 8.48                   | 0.66                              | 5.58                   | 2.19                              | 1.439  | 245          | 238.9                                 |
| MP3510PDGC                | 38.10          | 16.69        | 11.48        | 8.48                   | 0.66                              | 5.58                   | 2.19                              | 1.439  | 245          | 238.9                                 |
| MP3510VDGC                | 38.10          | 16.69        | 11.48        | 8.48                   | 0.66                              | 5.58                   | 2.19                              | 1.439  | 245          | 238.9                                 |
| MP4010LDGC                | 43.05          | 19.86        | 11.48        | 9.76                   | 0.73                              | 7.15                   | 3.10                              | 2.270  | 245          | 231.1                                 |
| MP4010PDGC                | 43.05          | 19.86        | 11.48        | 9.76                   | 0.73                              | 7.15                   | 3.10                              | 2.270  | 245          | 231.1                                 |
| MP4010VDGC                | 43.05          | 19.86        | 11.48        | 9.76                   | 0.73                              | 7.15                   | 3.10                              | 2.270  | 245          | 231.1                                 |
| MP4510LDGC                | 48.13          | 19.86        | 11.48        | 10.55                  | 0.94                              | 9.91                   | 3.10                              | 2.912  | 245          | 274.4                                 |
| MP4510PDGC                | 48.13          | 19.86        | 11.48        | 10.55                  | 0.94                              | 9.91                   | 3.10                              | 2.912  | 245          | 274.4                                 |
| MP4510VDGC                | 48.13          | 19.86        | 11.48        | 10.55                  | 0.94                              | 9.91                   | 3.10                              | 2.912  | 245          | 274.4                                 |

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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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